

REMARKS

Claims 1-9 are all the claims pending in the application. Claims 1-7 are rejected. Claims 8 and 9 are withdrawn from consideration. New claims 10-12 are added. New claim 10 is clearly supported by the description of page 15, lines 1-14, and new claims 11 and 12 are clearly supported by the description of page 26, line 23 to page 27, line 2 of the original specification. Thus, no new matter is added.

Election/Restrictions

The Examiner has requested Applicants to confirm an oral election made in response to a telephone interview in which a restriction between Group I (claims 1-7 drawn to a method) and Group II (claims 8-9 drawn to an apparatus) was made by the Examiner. Applicants provisionally elected Group I for examination with traverse.

Applicants confirm the election, as required by the Examiner. Applicants have traversed the restriction requirement because the steps, as recited in the elected method claims, particularly claim 1, would be accomplished by structures of a manufacturing apparatus that are adapted to perform the recited method steps. The scope of search is identical and no added issues are involved. Thus, withdrawal of the restriction requirement is respectfully requested.

Even if the Examiner does not agree with the sound basis for traversal set forth by Applicants, Applicants asserts, however, that the invention of claims 10-12 is within the field of the method of the elected claims. Thus, claims 1-7 and 10-12 should be examined together.

Claim Rejections - 35 U.S.C. § 103

Claims 1-7 are rejected as being unpatentable over Applicants' admitted art in view of JP 8-277132. This rejection is traversed for at least the following reasons.

First, the distinctions between the admitted art and the present invention are clearly set forth in the specification at pages 1-4, with a particular focus on the problems encountered in the prior approaches. The Examiner has cited JP 8-277132 for an alleged teaching that remedies the deficiencies in the prior art and, does so in the same manner as claimed. However, Applicants note that according to the cited reference, a glass having a predetermined weight is merely supplied on the molding die by dropping the molten glass. In this method, the separation of the

flowing molten glass is completed before the glass reaches the molding die. Further, when the molten glass is supplied on the molding die, the molding die need not be close to the tip of flow-out nozzle.

By contrast, according to the present invention as defined in claim 1, the “remaining step” (i.e., keeping the molten glass with a predetermined weight on the molding die) is carried out after the “receiving step” (receiving a down-flowing molten glass on a molding die). Therefore, the separation of the flowing molten glass is completed after the glass reaches the molding die.

Moreover, as would be understood by one skilled in the art from the sequence of steps in claim 1, the separation of the flowing molten glass is carried out under conditions such that the tip of the flow-out nozzle is necessarily apart from the molding die. Therefore, in the “receiving step,” it is not necessary to have the flow-out nozzle be close to the molding die. However, as noted by the inventors, if the gas flow rate is maintained in the receiving step, a turbulence develops and there is a violent interaction with the glass. As a consequence, there is an undesirable incidence of internal defects, such as foldouts and strias. Notably, JP 8-277132 does not disclose or suggest such a problem.

According to the present invention, the flow rate of the gas is reduced in the receiving step. Specifically, the receiving step is carried out by spraying the molten glass with gas having a flow rate lower than the gas used in the spraying step, or the receiving step is carried out without performing the gas spraying. Thereby, the present invention expressly teaches how to solve the above-mentioned problem.

In summary, JP 8-277132 does not disclose (1) the “receiving step” and the “remaining step” as claimed, or (2) the reduction (variation) of the gas flow rate. Therefore, the cited reference can not solve the above-mentioned problem that is solved by the present invention and therefore, it can not achieve the effect of the present invention. As a result, the present invention as set forth in claims 1-7 are patentably different from the cited reference and clearly are allowable over the admitted art and the cited reference. For the same reasons, claims 10-12 also would be patentable.

Amendment under 37 C.F.R. § 1.111
Application No. 09/955,169

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER


Alan J. Kasper
Registration No. 25,426

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